REMARKS

Summary Of The Office Action

Claims 1-9 are all the claims pending in the application.

Claims 6-9 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 1 and 4 are rejected under 35 U.S.C. § 102(b) as being anticipated by Nara (EP 0817440).

Claims 2, 3 and 5 are rejected under 35 U.S.C. § 103 as being unpatentable over Nara in view of the admitted prior art.

Applicants comments with respect to these rejections are set forth below.

Additionally, claim 3 is objected to because of an informality which is addressed in this Amendment.

Claim Rejections Under 35 U.S.C. § 112

The Examiner once again rejects claim 6, stating that the limitations "a frame length indicating parameter" and "a frame length parameter" have exactly the same purpose. Applicant amends claim 6 and the specification at page 10 to more clearly distinguish the purposes of these claimed parameters.

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Claim Rejections Under 35 U.S.C. § 102

Claims 1 and 4 are rejected under 35 U.S.C. § 102 as being anticipated by Nara. In response to the previous Office Action, claims 1 and 4 were amended to specify that the frame length was detected from the input data which has not been decoded by the preliminary decoding part, and it was argued that claims 1 and 4 are distinguishable over Nara at least because of this feature. In the present Office Action the Examiner states that the second transmission rate judgment means 108 receives the signals 109-112 from element 101, and that the signals 109-112 are not processed by the viterbi decoder 102. From this, the Examiner concludes that Nara teaches a frame length detected from the input data, i.e., the signal output from the element 101, which have not been decoded by the preliminary decoding part.

Applicant submits that although the bit signals 109-112 might sometimes be used as a factor in determining frame length, the use of the signals does not correspond to the claimed "frame length detected from the input data which has not been decoded by the preliminary decoding part." Nara discloses a first transmission rate judgment means 104 which includes a threshold value judgment means 103. The threshold judgment means 103 receives path metric signals 113-116 from the viterbi decoding means 102 and performs an initial determination of the reliability of the decoding result at each respective transmission rate. The transmission rate determination means 105 makes the determination of the transmission rate for each received frame of data. If the transmission rate determination judgment means 105 identifies more than one candidate transmission rate based upon the information received from the first transmission

rate judgment means 104, then a second transmission rate judgment means 108 provides further information for determining a transmission rate.

The second transmission rate judgment means 108 includes a convolutional encoding means 106 and a bit comparison means 107. The convolutional encoding means 106 converts the output of the viterbi decoder 102 back into convolutionally encoded bit sequences 129-132 which are compared with the combined bit signals 109-112. That is, the bit comparison means 107 compares the bit rows of the combined bit signals 109-112 with the bit rows of the viterbi encoded signals 129-132 for each of the respective transmission rates to obtain counts of the number of non-matching bits for each transmission rate. The bit comparison means 107 outputs these counts to the rate determination means 105. The second transmission rate judgment 108 performs the above-described operations only for the candidate transmission rates designated on signal line 137 by the transmission rate determination means 105. If the second transmission rate judgment means 108 receives no signal 137 designating a candidate transmission rate, the second transmission rate judgment means 108 does not operate.

In view of the above description of Nara's rate judgment operation rate, Applicant submits that Nara does not teach detecting a frame length from the input data which has not been decoded by the preliminary decoding part. While the bit signals 109-112 might sometimes be used as a factor in making a transmission rate judgment, the frame length is not detected from the input data which has not been decoded by the preliminary decoding part.

Additionally, Nara does not teach detecting a frame length. Figure 1 shows frames as transmitted in a variable rate transmission system having a fixed time duration or "transmission frame work t_f" 181, regardless of the amount of data transmitted therein in accordance with a selected transmission rate. Use of such fixed width frames permits a receiver to handle communications on a frame by frame basis according to the uniform duration in time. Although the frame width is constant, the duration of each transmitted bit is uniformly and proportionally varied. For example, if the width 182 of a bit of a frame formatted for transmission at the 9.6 kbps rate is one unit of time t, two units of time 2t, 183, are needed per bit for transmission at the 4.8 kbps rate. See page 2, lines 22-31. Thus, Nara does not teach anything with regard to detecting frame lengths, because the frame length is assumed to be constant. Therefore, even if it were to be assumed for the sake of argument that the transmission rate determination means 105 detects the transmission rate from the fixed signals 109-112, Nara would still not teach detecting a frame length from the input data.

Claims 2-3 are patentable at least by virtue of their dependency from claim 1, since the admitted prior art does not make up for the deficiencies of Nara that were described above, and the combination of Nara and the admitted prior art do note render obvious the invention defined by claims 2-3.
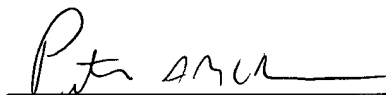
Regarding claim 4, reasoning similar to claim 1 applies also to claim 4. And claim 5 is patentable at least by virtue of its dependence from claim 4.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: August 29, 2005

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